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TEST REPORT IES LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products.	
Intertek Report No.:	CE-JOB-NDB-20-000154-002
Date of Report issue:	28.02.2020
Total number of pages:	08
Testing Laboratory:	Intertek India Private Limited
Address:	E-26, Block B1, Mohan Co-Operative Industrial Area, Mathura Road, New Delhi -110044, India
Customer / Applicant's name:	R. STAHL Private Ltd.
Address:	Plot No. 5, Malrosapuram Main Road Sengundram Ind. Area Singaperumal Koil Kancheepuram Dist Tamilnadu PIN 603 204 India
Discipline:	Photometry
Product Group:	Light Sources (Electric Lamp)
Test specification:	
Standard:	IES LM-79-08
Non-standard test method:	N/A
Test Report Form No.:	LFT-APAC-IN-OP-10t
Version:	27 th Jan 2020
Test item description:	LED Flood Light
Trade Mark:	STAHL
Manufacturer:	R. STAHL Private Ltd.
Model/Type reference:	6525/2, 6125/2 -100W wide beam LED flood light
Ratings:	230V AC, 50Hz, 100W, 0.43A
Tested by (Name + Signature + Function):	SHASHANK PANDEY (Engineer)
Reviewed by (Name + Signature + Function):	HARI OM (Technical Leader - Lighting Performance)
An independent organization testing for safety, performance, and certification.	
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<p>General product information: The LED Light is provided with supply cord for connection.</p> <p>Binning details: N6 B2 K2, 5700K, CRI70</p> <p>LED Details*: Make: Osram, Model: ----, No. of LEDs:-----</p> <p>LED Controlgear/Driver Details*: Make: ----, Model: ----, No. of LED Drivers: ----</p> <p>LEDs provided with Lenses /Glass/-Diffuser.....: Yes/No.</p> <p>Note: *As declared by the Customer / Applicant.</p>
<p>Testing:</p> <p>Date of receipt of test item.....: 31.01.2020</p> <p>Condition of Sample Received.....: Physically good</p> <p>Sample Identification no(s).....: D26200131-007</p> <p>Sample Serial no(s).....: ----</p> <p>Date (s) of performance of tests.....: 05.02.2020 & 11.02.2020</p>
<p>Laboratory conditions:</p> <p>Ambient Temperature.....: 25 ± 4°C</p> <p>Relative humidity.....: Less than 70 %</p>
<p>General remarks (if any):</p> <p>The test results reported in this report relate only to the sample tested. This report shall not be reproduced, except in full, without the written approval of report issuing testing laboratory.</p>
<p>Remarks :</p> <p>The results tabulated in this report are representative of the actual test sample(s) submitted for this report only. The data is provided to the customer for further evaluation. Compliance to the referenced specification requirements is not determined in this report.</p> <p>The report format is customized as per customer (R. STAHL Private Ltd.) request</p> <p>This report includes Annexure A (total 5pages) and shall be read in conjunction with this report no. CE-JOB-NDB-20-000154-002</p>

SUMMARY OF TEST RESULTS		
Sr. No.	Tests performed (name of test and test clause)	Verdict
1.	Electrical and Photometric measurements (Clause 8, 9, 10 and 11)	To be evaluated by customer
2.	Colorimetric measurements (Clause 12)	To be evaluated by customer

EQUIPMENTS USED				
Sr. No.	Equipment ID	Equipment name	Last calibration date	Next calibration date
1	ETL-LED-0094	High Speed Type-C Goniophotometer	Verified before use	Verified before use
2	ETL-LED-0095	Luminous Intensity Standard Lamp	05.10.2015	After 50Hrs. burning time
3	ETL-LED-0096	Luminous Intensity Standard Lamp	05.10.2015	After 50Hrs. burning time
4	ETL-LED-0097	Luminous Intensity Standard Lamp	05.10.2015	After 50Hrs. burning time
5	ETL-LED-0100	Digital Power Meter	13.06.2019	12.06.2020
6	ETL-LED-0105	Integrating Sphere	Verified before use	Verified before use
7	ETL-LED-0106	Spectral Flux Calibrated Standard Lamp	11.11.2015	After 50Hrs. burning time
8	ETL-LED-0111	Digital Power Meter	17.04.2019	16.04.2020
9	ETL-LED-0294	Humidity-cum Temperature Meter	12.11.2019	11.11.2020

Test No.01 Electrical and Photometric measurements - Distribution Method

TEST METHOD:

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample. Photometric distance was more than five times of the largest dimension of the test sample i.e. 8.63meter.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. The ambient temperature was maintained at **25.1°C** during testing.

Sample was operated at input rated voltage in its designated orientation as specified by Manufacturer.

Electrical measurements including voltage, current, and power were measured using the Yokogawa WT310 digital power meter.

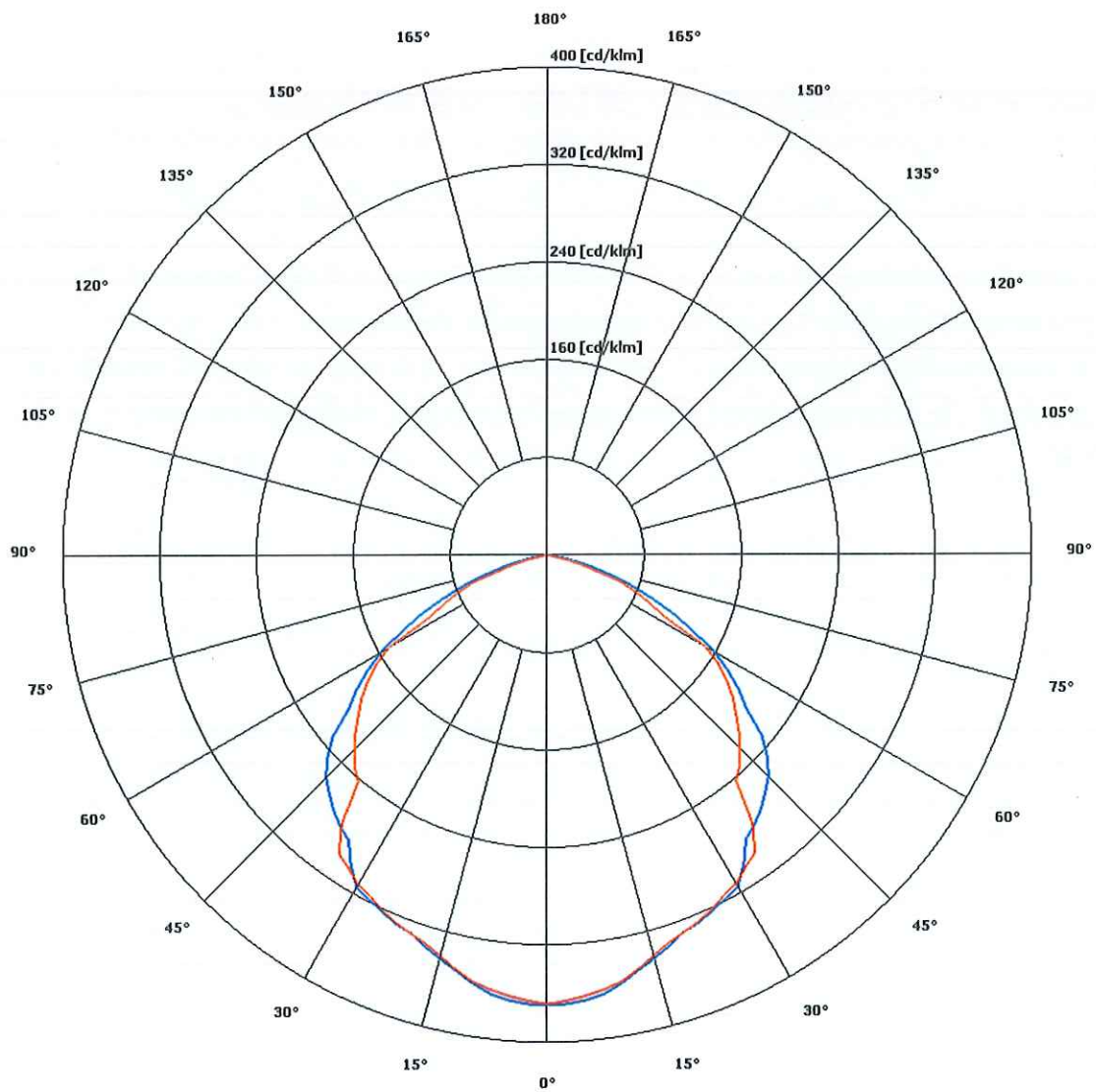
Each sample was allowed to stabilize before measurements were made. The condition of the sample tested was new. Stabilization time before testing was **75** minutes.

TEST RESULTS

Input Voltage (Vac)	Input Frequency (Hz)	Input Current (A)	Input Power (W)	Input Power Factor
230.07	50.0	0.450	99.97	0.965

Total Luminous Flux (lm)	Luminous Efficacy (lm/W)
11574.0	115.8

POLAR DIAGRAM:



Axis	Color
<input checked="" type="checkbox"/> Horizontal	Red
<input checked="" type="checkbox"/> Vertical	Blue



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Test No.02 Colorimetric Measurements - Integrating Sphere Method

TEST METHOD:

A Labsphere Three Meter Integrating Sphere was used to measure correlated color temperature, chromaticity coordinates and the color rendering index for each sample. 4π geometry was used.

Orientation (burning position) of product during testing was its normal burning position as specified by manufacturer.

Ambient temperature was measured at a position inside the sphere and was maintained at **25.4°C** during testing.

Sample was allowed to stabilize for at least thirty minutes before measurements were made. The Stabilization time for the sample was **65** minutes. The condition of the sample tested was new.

Electrical measurements including voltage, current, and power were measure using the Xitron Power Meter.

The calibration of the sphere spectroradiometer system is traceable to the National Institute of Standards and Technology.

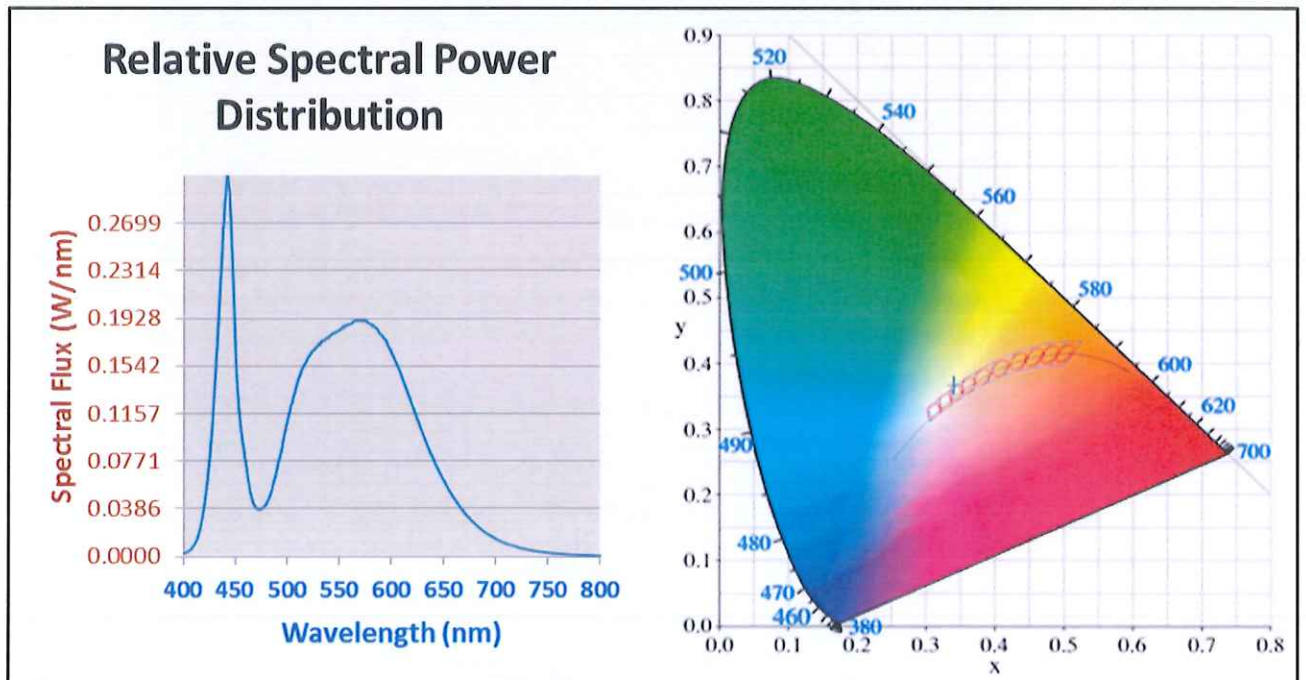
TEST RESULTS

Spectral Distribution

Dominant Wavelength nm	Radiant Flux	Peak Wavelength nm
562	34.438	442

CCT		CRI		x		y		Duv		u'		v'	
5217.0		71.5		0.3403		0.3664		0.0092		0.2027		0.4910	
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
67.6	75.2	84.2	73.3	70.4	69.5	78.8	53.3	-43	44.6	73.5	53.2	68.2	91.3

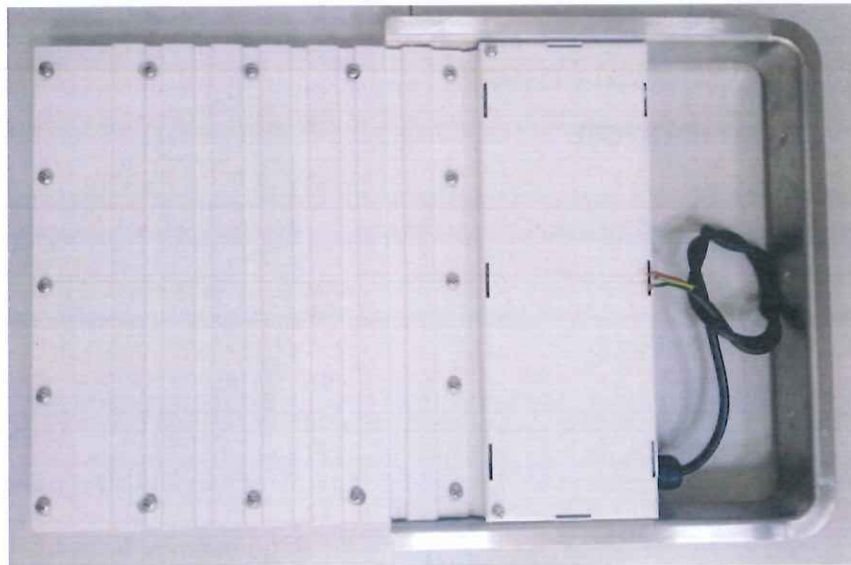
Spectral Data over Visible Wavelengths



SAMPLE PHOTOGRAPHS:



Front View



Rear View

*****End of report*****